Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006

Issuing Date: 2018-05-23 **Revision Date:** 2022-11-22 **Version:** 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product No 7727

Product name Biotinylated Protein Ladder Detection Pack

Kit Component Biotinylated Protein Ladder
Anti-biotin, HRP-linked Antibody

Contains

Chemical name	Index No.	CAS No
glycerol (60 - 70%)	Not Listed	56-81-5
sodium dodecyl sulphate (0 - 10%)	Not Listed	151-21-3
(R*,R*)-1,4-dimercaptobutane-2,3-diol (0 - 10%)	Not Listed	3483-12-3

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses For research use only

1.3. Details of the supplier of the safety data sheet

Importer
Cell Signaling Technology Europe B.V.
Dellaertweg 9b
2316 WZ Leiden
The Netherlands
TEL: +31 (0)71 7200 200
FAX: +31 (0)71 891 0019

Manufacturer
Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400

Website www.cellsignal.com
E-mail Address info@cellsignal.eu

1.4. Emergency telephone number

CHEMTREC 24 hours a day, 7 days a week, 365 days a year
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Signal word
Warning.

Hazard statement(s)
H319 - Causes serious eye irritation.

Precautionary statement(s)
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 3. Composition/information on ingredients

Kit Component Biotinylated Protein Ladder

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	5-10	200-289-5	-	no data available
sodium dodecyl sulphate	151-21-3	1-5	205-788-1	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 3 (H311)	no data available
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	0.1-<1	222-468-7	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	no data available

Kit Component Anti-biotin, HRP-linked Antibody

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	30-60	200-289-5	-	no data available

For the full text of the R-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice.

Inhalation	Move to fresh air.
Skin contact	Wash skin with soap and water.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Evacuate personnel to safe areas. Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values					
Chemical name	**European Union**	**United Kingdom**	**France**	**Spain**	**Germany**
glycerol		STEL 30 mg/m ^{3} TWA 10 mg/m ^{3}	TWA 10 mg/m ^{3}	TWA 10 mg/m ^{3}	Ceiling / Peak: 400 mg/m^3 TWA: 200 mg/m^3
Chemical name	**Italy**	**Portugal**	**Netherlands**	**Finland**	**Denmark**
glycerol		TWA 10 mg/m ^{3}		TWA 20 mg/m ^{3}	
Chemical name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
glycerol		SS-C** TWA 50 mg/m ^{3} STEL 100 mg/m ^{3}	TWA 10 mg/m ^{3}		TWA 10 mg/m ^{3} STEL 30 mg/m ^{3}

8.2. Exposure controls

Appropriate engineering controls
Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Safety glasses with side-shields
Skin protection	Wear protective gloves and protective clothing
Hand protection	Impervious gloves.
Other	Wear suitable protective clothing.
Respiratory protection	In case of inadequate ventilation wear respiratory protection.

Environmental Exposure Controls
No information available.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Information on the known physical chemical properties of each component within Kit are given below. If not included, information is either not available or not applicable. Refer to individual kit component SDS for further information.

Kit Component	**Biotinylated Protein Ladder**
Physical state	Liquid
Appearance	Clear
Color	Red
pH VALUE	6-8 (20 °C)

Kit Component	**Anti-biotin, HRP-linked Antibody**
Physical state	Liquid
Appearance	Clear
Color	Colorless

pH VALUE	7.5 (20 °C)

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.
Hazardous reactions None under normal processing.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information
This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
glycerol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m³ (Rat) 1 h
sodium dodecyl sulphate	= 1288 mg/kg (Rat)	= 200 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h
(R*,R*)-1,4-dimercaptobutane-2,3-diol	400 mg/kg (Rat)	-	-

Information on likely routes of exposure

Inhalation

Kit Component **Biotinylated Protein Ladder**
Inhalation No information available.

Kit Component **Anti-biotin, HRP-linked Antibody**
Inhalation No information available.

Eye contact

Kit Component	**Biotinylated Protein Ladder**
Eye contact	Contact with eyes may cause irritation.
Kit Component	**Anti-biotin, HRP-linked Antibody**
Eye contact	May cause slight irritation.

Skin contact

Kit Component	**Biotinylated Protein Ladder**
Skin contact	May cause irritation.
Kit Component	**Anti-biotin, HRP-linked Antibody**
Skin contact	Avoid contact with skin.

Ingestion

Kit Component	**Biotinylated Protein Ladder**
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Kit Component	**Anti-biotin, HRP-linked Antibody**
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms	Eye irritation
Skin and Eye Corrosion/Irritation	No information available
Sensitization	No information available
Mutagenic effects	No information available
Carcinogenic effects	No information available
Reproductive toxicity	No information available.
Systemic Target Organ Toxicity (STOT)	No information available
Aspiration Hazard	No information available.

11.2. Information on other hazards

Other adverse effects	No information available.

SECTION 12: Ecological information

12.1. Toxicity

Product Information No information available

Component Information

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
glycerol	-	LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h	EC50 500 mg/L (Daphnia magna) 24 h
sodium dodecyl sulphate	EC50 53 mg/L (Desmodesmus	LC50 8 - 12.5 mg/L (Pimephales	EC50 21.2 mg/L (Daphnia magna)

	subspicatus) 72 h EC50 30 - 100 mg/L (Desmodesmus subspicatus) 96 h EC50 42 mg/L (Desmodesmus subspicatus) 96 h EC50 3.59 - 15.6 mg/L (Pseudokirchneriella subcapitata) 96 h EC50 117 mg/L (Pseudokirchneriella subcapitata) 96 h	promelas) 96 h LC50 4.1 mg/L (Leuciscus idus) 48 h LC50 22.1 - 22.8 mg/L (Pimephales promelas) 96 h LC50 4.3 - 8.5 mg/L (Oncorhynchus mykiss) 96 h LC50 4.62 mg/L (Oncorhynchus mykiss) 96 h LC50 4.2 mg/L (Oncorhynchus mykiss) 96 h LC50 7.97 mg/L (Brachydanio rerio) 96 h LC50 9.9 - 20.1 mg/L (Brachydanio rerio) 96 h LC50 4.06 - 5.75 mg/L (Lepomis macrochirus) 96 h LC50 4.2 - 4.8 mg/L (Lepomis macrochirus) 96 h LC50 4.5 mg/L (Lepomis macrochirus) 96 h LC50 5.8 - 7.5 mg/L (Pimephales promelas) 96 h LC50 10.2 - 22.5 mg/L (Pimephales promelas) 96 h LC50 6.2 - 9.6 mg/L (Pimephales promelas) 96 h LC50 13.5 - 18.3 mg/L (Poecilia reticulata) 96 h LC50 10.8 - 16.6 mg/L (Poecilia reticulata) 96 h LC50 1.31 mg/L (Cyprinus carpio) 96 h LC50 15 - 18.9 mg/L (Pimephales promelas) 96 h	24 h EC50 1.8 mg/L (Daphnia magna) 48 h

12.2. Persistence and degradability

Kit Component	**Biotinylated Protein Ladder**
Persistence and degradability	Product is biodegradable

12.3. Bioaccumulative potential

Kit Component	**Biotinylated Protein Ladder**
Bioaccumulation	Not likely to bioaccumulate

Chemical name	**Octanol-Water Partition Coefficient**
glycerol	-1.76
sodium dodecyl sulphate	1.6

12.4. Mobility in soil

Kit Component	**Biotinylated Protein Ladder**
Mobility	Will likely be mobile in the environment due to its water solubility

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Other information	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG/IMO

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	Not regulated

ADR/RID

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None

IATA

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Candidate List of Substances of Very High Concern for Authorization Information

This product does not contain Substances of Very High Concern (SVHC).

SEVESO Directive Information

This product does not contain substances identified in the SEVESO Directive.

International inventories

TSCA 8(b)	TSCA 8(b)
DSL/NDSL	DSL/NDSL
EINECS/ELINCS	EINECS/ELINCS
ENCS	ENCS
IECSC	IECSC
KECL	KECL
PICCS	PICCS
AICS	AICS

International inventories legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 and 3

H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Classification procedure: Expert judgment and weight of evidence determination.
Issuing Date: 2018-05-23
Revision Date: 2022-11-22

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.